Espanola District Fisheries Management Plan 1986-2000

Draft

Ontario

Ministry of Natural Resources

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PREFACE

The Ministry of Natural Resources has the primary responsibility for the management of the Province's natural resources, in particular, those related to resource development and outdoor recreation. This document consists of fisheries resource information and management strategies which collectively form the Espanola District Fisheries Management Plan. This plan describes in a formal way, the long term direction of fisheries management efforts in the Espanola District to the year 2000, as well as the short-term actions to be carried out within the first 5 year period. Further, it provides a measure against which the fisheries management program in the Espanola District can be evaluated by both the managers and the public.

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1. INTRODUCTION

1.1 PURPOSE

The purpose of this management plan is to identify both long term (to the year 2000) fisheries management direction and specific short term (5 year) fisheries management tactics to be carried out within the Espanola District.

The Fisheries Management Plan considers the 17,728 km^2 of land and water under the jurisdiction of the Espanola Administrative District of the Ontario Ministry of Natural Resources. The waters of Lake Huron represent approximately 6,977 km^2 of this total.

1.2 PLANNING PROCESS

The **Espanola District Fisheries Management Plan** has been prepared within the Ministry's resource planning system. The **Strategic Land Use Plan for Northeastern Ontario** indicates at a broad level how the Ministry of Natural Resources intends to undertake various land-use programs in order to provide optimum use of the resources with a minimum of conflict to achieve established objectives. The **Espanola District Land Use Guidelines** identifies targets for all Ministry programs including fisheries management, and outlines generally how management efforts will be directed toward achieving program targets within specific geographic areas.

Detailed management strategies are set out in this **Fisheries Management Plan.** These strategies indicate how the Ministry intends to manage the fisheries of the Espanola District, to achieve targets for both the recreational and commercial use of the fisheries resource. An implementation schedule is also included and describes specific tactics which will be carried out in the first 5 year period to meet fisheries management objectives. Annual fisheries work program plans will be developed in accordance with this fisheries implementation schedule and will outline the actual fisheries management tactics to be implemented each year.

1.3 EXISTING POLICY AND TECHNICAL DIRECTION

This management plan has been prepared within the context of the Ministry's resource planning system, according to Ministry policy and accepted resource management principles. Important policy direction such as the treatment of particular resource areas and values, requirements of other Ministry programs, and resource access has been provided through the **Espanola District Land Use Guidelines**, and forms the basis within which this fisheries management plan has been prepared.

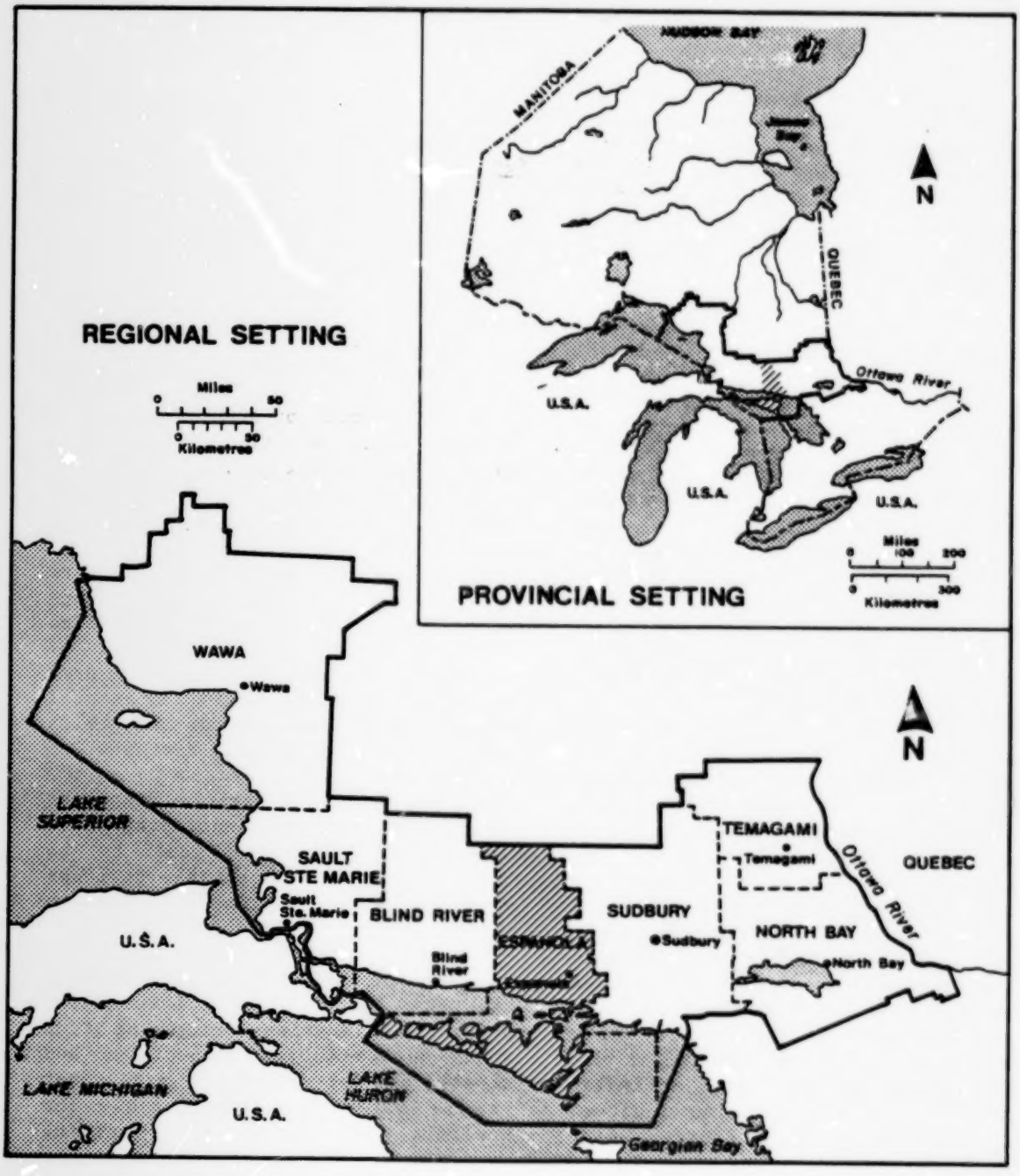
Futhermore, all strategies satisfy the principles stated in the **Strategic Plan for Ontario Fisheries** (SPOF), and in full recognition of and in co-operation with other uses or users of the district resource base. "A Framework for Fisheries Management in the Northeastern Region" provided direction for the development of district fisheries management plans by identifying those management principles felt to be most relevant and acceptable to fisheries management in the northeastern planning region.

The Lake Huron Management Committee has prepared a draft **Lake Huron Strategic Fisheries Management Plan** which outlines broad objectives and strategies for fisheries management in the waters of Lake Huron. The specific strategies for managing

FIGURE 1

PROVINCIAL AND REGIONAL SETTING OF ESPANOLA DISTRICT

Espanola District
District Administrative Boundary
Northeastern Region Administrative Boundary
Provincial Boundary
International Boundary



the Espanola portion of Lake Huron are included in this District Fisheries Management Plan.

1.4 BACKGROUND INFORMATION

Detailed background reports and analyses have been prepared and form the basis for the management direction outlined in this plan. The public was given the opportunity to review the Background Information and Management Options and their response has been considered in the preparation of this Fisheries Management Plan.

The following supporting reports or analyses are available for reference at the Espanola District office.

.Background Information and Problems and Issues Report

.Target Testing Analysis

.Analysis of Optional Management Strategies

.Summary of Public Response to the Background Information and Management Options

1.5 PUBLIC RESPONSE TO MANAGEMENT OPTION

The purpose of public consultation is to assist the Ministry in the preparation of plans that best serve the public. To accomplish this, the public was invited to comment on the Background Information and Management Options prior to the preparation of a draft Fisheries Management Plan. The input received from the public provided the Ministry with additional information on local needs and concerns.

The background fisheries resource information and management options were presented to the public at two Open Houses on January 29 and 30, 1986. The Open Houses were attended by approximately 184 people representing most interest groups as well as interested individuals. As well, approximately 300 summary documents were distributed to various groups, agencies and individuals. A total of 93 written comments or briefs were received.

Key Issues and Concerns:

The main points of concern raised by the public in reponse to the Background Information and Management Options are summarized in a report available at the Espanola District Office. Briefly, the major issues discussed by respondents were:

.over 300 people, by means of a petition, identified the need for a world class fishery in the waters surrounding Manitoulin Island, and requested the stocking of chinook salmon.

.many comments related to increased fish stocking programs, with requests for stocking a variety of species, and a number of district waterbodies.

.a need for better communication between the MNR and the public, and a need for better public information and education were identified many times.

.comments from the Tourist Industry emphasized the importance of the sport fishery as a basis for tourism in the district, and the need for more "innovative" management programs.

.the Commerical Fishing industry expressed concern that commercial

fishermen may become more restricted by additional area closures or gear restrictions. They also requested that commercial fishermen be allocated a quota for any fish species which are stocked in Lake Huron (eg. salmon, lake trout, backcross).

Ministry Response:

.The Ministry recognizes the importance of an improved sport fishery in the waters surrounding Manitoulin Island, and has suggested a strategy for the stocking of a combination of lake trout backcross and chinook salmon.

.The District will look at ways of diversifying our fish stocking program in inland waters, while making the best use of hatchery fish. Other management strategies, aimed at maintaining or improving the potential of natural fish populations are often preferable to large stocking programs.

.A greater emphasis will be placed on public information and education programs, and the Ministry will encourage programs which directly involve the public in fisheries management.

.The Ministry recognizes the importance of a good fisheries resource base to the tourist industry in the District. Stocking of coldwater species in both inland lakes and Lake Huron, rehabilitation of former walleye fisheries and maintaining or improving native fish populations will all benefit the tourist industry. Access road policies and management strategies for Designated Tourism Lakes will help to ensure the maintenance of remote fly-in fisheries.

.Commercial fish harvest is regulated through quota management. Additional areas will not normally be closed to commercial fishing, although fishing may be restricted to certain times of year, in specific locations, by condition of licence. There is clearly a need to develop a more equitable policy regarding commercial catches of chinook salmon.

2. DISTRICT FISHERIES PERSPECTIVE

2.1 THE RESOURCE

The Espanola District is located within a transitional zone that separates Northern and Southern Ontario. Manitoulin Island is similar in climate and landform to the Tobermory-Owen Sound area, while that part of the District north of the Trans-Canada Highway is typical of the Canadian Shield.

The mainland, or North Shore portion of the district, underlain by the Precambrian Shield is characterized by a multitude of lakes, rivers and streams. Many of the larger shield lakes, 50 to 1500 ha in size are deep, cold, nutrient-poor lake trout-lake whitefish waters. The smaller shield lakes have conditions which make them suitable for the stocking of brook trout, rainbow trout and splake to provide artificially maintained fishing opportunities. Numerous warmwater lakes, ranging in size from 10 to 2900 ha. support populations of northern pike, lake whitefish and yellow perch. Walleye (yellow pickerel) and bass occur mainly in the southern portions of the district.

The limestone plains of Manitoulin Island are dotted with approximately 200 bodies of water and indented at several locations, predominantly on the northern shoreline, by relatively large, discrete bays. Manitoulin Island lakes are generally more nutrient-rich, and therefore more productive than lakes on the North Shore. Coldwater streams, mainly on the south shore of Manitoulin, support brook trout, and spawning runs of rainbow trout and salmon.

Fish stocking of lake, brook and rainbow trout has been extensive within the District since the 1920's. In general, brook and rainbow trout are stocked to create artificially maintained stocks which provide a put-grow-take fishery while lake trout are stocked primarily to supplement naturally reproducing populations.

Stocking of warm water fish species such as smallmouth and largemouth bass, muskellunge and walleye was more widespread within the District during the 1950's and early 1960's. The declining trend of walleye populations has initiated renewed interest in stocking walleye to rehabilitate former fisheries. Bass and muskellunge are normally stocked only as introductions to suitable lakes.

Lake Huron is composed of three natural basins; Georgian Bay, the North Channel and Lake Huron proper. The Espanola District encompasses portions of all three basins. Historically, lake trout was the principal predator and lake whitefish, lake herring, several species of chub and sculpins were the main prey species. The inshore areas supported populations of walleye, yellow perch, northern pike, muskellunge, large and smallmouth bass and various panfish.

A variety of stresses have combined to cause changes in the fish community of Lake Huron. Declining numbers of lake trout, lake herring, walleye, and lake sturgeon have been noted while large populations of non-native species such as sea lamprey, rainbow smelt and alewives are prevalent.

The strategies outlined in the draft Lake Huron Strategic Fisheries Management Plan are founded on the premise that native species will provide the most stable, self-sustaining fish community, essential for meeting long-term goals and objective for Lake Huron. The

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ESPANOLA
ADMINISTRATIVE DISTRICT
NORTHEASTERN REGION

FIGURE 2

ESPANOLA DISTRICT

offshore fish community is to be re-established with the lake trout backcross or lake trout. Chinook salmon may be stocked in the interim, in specific locations. The modernization of the commercial fishery and re-establishment of depleted walleye populations will provide the other major management thrusts for Lake Huron during the first five years.

2.2 RESOURCE USE

Sport Fish:

Sport fishing represents a significant form of outdoor recreation within the Espanola District and forms the main basis of the tourist industry. Recent district creel surveys indicate that approximately 213,050 angler days of sport fishing are provided annually on district inland lakes. It is estimated that stream and river fisheries provide an additional 10%, or 21,305 angler days.

Lake Huron, particularly the North Channel waters, also provides unique opportunities for avid anglers. Estimates derived from the 1980 Provincial Angler Survey indicated that approximately 37,000 angler days were provided from the Lake Huron waters of the Espanola District. The sport fishery at that time consisted mainly of cool and warmwater species and the majority of this angling pressure occurred in the North Channel waters.

In the past five years salmon fishing has become increasingly popular and now provides an estimated 4000 angling opportunities annually. The sport fishery for lake trout backcross in the Heywood Island and Gore Bay areas provide an additional 9000 angler days.

There are 147 commercial tourist establishments in the Espanola District. Of these, 93 are located on Manitoulin Island and 54 are located on the North Shore. Many of these cater to fishermen and over half provide rental boats. There is one organized charter boat service operating on Lake Huron.

There are 16 commercial outpost camps used for fly-in fishing and hunting on northern lakes. An additional 30 "designated tourism lakes" are used by commercial outfitters for fly-in or boat-in day use.

In general, the most sought after sport fish species district-wide are the lake trout and walleye. At certain times of the year however, other fish species become locally significant, such as yellow perch in the bays of the North Channel, rainbow smelt and coarse fish (carp and suckers) in local areas. Other angler-preferred species include bass (smallmouth and largemouth), brook trout, northern pike, and salmon.

Commercial Fish:

In 1985, the Lake Huron fishery within the Espanola District supported 27 commercial licences. The total 1985 quota allocation (all species) for commercial fishermen licensed in the Espanola District was 569,023 kg per year.

Catch records indicate that lake whitefish has averaged in excess of 70% of the total catch. Chub harvests also make up a significant proportion of the catch (Table 1).

Table 1. Potential annual yields from the Espanola District portion of Lake Huron, and the allocation between the sport and commercial fisheries.

Basin/ Surface Area	Species	Potential Annual Yield	Allocation of Allowable Harvest	
			Sport Fishery	Commercial Fishery
ha		kg	kg/yr	kg/yr
North Channel	Walleye	21,073	17,265	3,808
	Northern Pike	108,312	97,003	11,309
182,770	Bass (+ Panfish)	90,260	90,260	-
	Yellow Perch	45,130	15,778	29,352
	Muskellunge	2,001	2,001	-
	Lake Whitefish	-	-	58,115
	Chub	-	-	455
	Sturgeon	-	-	4,739
	Trout	61,230	9,960	2,286
	Salmon	30,155	30,155	
	Sub-total		262,422	110,064
Georgian Bay	Northern Pike	35,302	34,167	1,135
	Bass (+ Panfish)	6,668	6,668	-
133,015	Yellow Perch	14,709	7,899	6,810
	Lake Whitefish	-	-	35,668
	Chub	-	-	33,858
	Trout/Salmon	66,508	65,963	545
	Sub-total		114,697	78,016
Lake Huron	Walleye	7,776	7,457	319
	Northern Pike	57,391	56,840	551
381,911	Bass (+ Panfish)	6,514	6,514	-
	Yellow Perch	19,833	17,972	1,861
	Lake Whitefish	-	-	293,310
	Chub	-	-	80,403
	Catfish	-	-	556
	Sturgeon	-	-	502
	Trout/Salmon	190,596	187,155	3,441
	Sub-total		275,938	380,943

Baitfish:

Baitfish harvests have shown a general increase over the past ten years, with an average annual harvest of 23,000 dozen baitfish. The North Shore area is licensed using an exclusive-use block system. On Manitoulin Island bait fishermen are licensed for specific lakes or streams. In 1984 there were 36 licensed bait fishermen in the District.

2.3 PROJECTED DEMAND

Sport Fish:

Table 2 gives the projected demand for sport fishing in the Espanola District and the potential annual allowable yield. These figures include the potential sport fish yields expected to result from current rehabilitation programs. For Lake Huron, allowable yields have been allocated between the sport and commercial fisheries (Table 1). For lake trout backcross 20% of the potential annual yield was allocated for harvest, with the remainder reserved for rehabilitation. For salmon and all coolwater species, 100% of the potential annual yield was allocated for harvest.

Demand for sport fishing in inland waters is expected to increase 12% by the year 2000, giving a projected demand of 262,500 angler days. Demand for cool and warmwater species in Lake Huron is expected to increase at the same rate (12%) as the inland sport fishery to a projected 41,440 angler days. The demand for trout and salmon is expected to double by the year 2000, giving a projected demand of 26,000 angler days for these species.

The projected harvest levels which would be necessary to meet anticipated sport fishing demand have been calculated using accepted quality standards (kg/angler day). A quality standard of 1 kg per angler day was used for all species in Lake Huron. For inland waters quality standards of 0.3 for coldwater and 0.5 for coolwater were used.

It would appear that anticipated demand for trout species from inland lakes can be met within the potential capabilities of the resource. This requires that all existing inland coldwater fisheries are managed to meet their maximum potential production, and that present stocking levels of all coldwater species be maintained. In fact, fishing pressure is not equally distributed among all trout lakes, and angler harvests are already approaching or exceeding potential yields of some lake trout fisheries (Lake Manitou, Iroquois Bay).

Meeting the future demand for trout species is also dependent on the successful establishment of a coldwater sport fishery in South Bay. This waterbody represents 34% of the district's potential trout production. This potential can only be met when an experimental stocking program of lake trout and lake trout backcross results in a sport fishery.

The potential supply of walleye from inland lakes is inadequate to meet anticipated demand for this species. Projected demand for other species (bass, pike, perch, whitefish) is well below their potential supply.

The projected demand for lake trout backcross in Lake Huron cannot be met at the quality standard of 1.0 kg per angler day, while allowing for rehabilation of the fishery. The potential supply of salmon and rainbow trout is more than adequate

Table 2. Projected demand for sport fishing in the Espanola District and potential annual allowable yield.

Species	Projected Demand - Year 2000 Angler Days	Quality Standard (kg/angler-days)	Harvest (kg)	Potential Annual Yield (kg) (supply)
Inland Waters				
trout	91,875	0.3	27,562.5	28,763.3
walleye	105,000	0.5	52,500.0	25,000
other	65,625	0.5	32,812.5	113,395.1
TOTAL	262,500		112,875.0	167,158.4
Lake Huron				
lake trout backcross	18,000	1.0	18,000	9,960
salmon	8,000	1.0	8,000	283,273
walleye other >	41,440	1.0	41,440 >	24,722 335,102
TOTAL	67,440		67,440	653,057

to meet the demand for these species. Although the Ministry of Natural Resources will not actively manage salmon to meet this potential production, some stocking will be allowed through the Community Fisheries Involvement Program.

Projected demand for walleye and other coolwater species in Lake Huron is well below their potential supply, although potential production of walleye may not be adequate to meet angler preference for this species.

Commercial Fish:

Commercial Fishing quotas have been established for individual species and fishing zones based on the best available information and technology. Commercial fishing is expected to continue at its present level with harvests averaging .57 million kg per year. Quotas will be adjusted as required to reflect expanding or declining stocks, and variations in year-class strength and species composition.

Bait Fish:

The demand for bait fish in the Espanola District is expected to increase at a rate proportional to the increase in angling effort. This would result in annual bait fish harvests averaging 25,750 dozen.

2.4 PROBLEMS AND ISSUES

A number of problems and issues have been identified which may constrain the effective management of the fisheries resource. These include loss of some former fish stocks, loss of fish habitat and water quality in some locations, localized exploitation problems, introduction of non-native species and conflicts between various user groups.

Meeting the demands for sport fishing will depend on maintaining or improving all existing fisheries and working toward resolving problems and issues.

3. MANAGEMENT DIRECTION

3.1 GENERAL FISHERIES MANAGEMENT OBJECTIVES

The fisheries management objective of the Ministry of Natural Resources is:

- to protect, enhance, maintain and rehabilitate fish communities and their environment in order to provide an optimum contribution of fish, fishing opportunities and associated benefits to society.

Discussion:

This objective illustrates the general direction for fisheries management in the district. In order to provide optimum recreation and economic benefits, the fisheries resource will be managed so as to meet, where possible, the demands for desired fish species on a self-sustained, balanced community basis.

The fisheries resource is managed for both recreational and commercial uses. The general fisheries management objective of the Ministry is supported by specific sport fish, commercial fish and lake trout objectives and targets for the Espanola District. These specific objectives and targets, were designed to meet anticipated demand in the district by the year 2000.

For each of these objectives and targets, a set of management strategies has been developed. They have been chosen from a number of options, and are considered the most effective and feasible means of achieving program targets and resolving issues.

Management tactics (actions) formulated to implement each strategy are listed. The identification of new and innovative ways to implement strategies is an ongoing process, and as better tactics are identified they will be utilized.

Strategies which apply throughout the district are identified in Section 3.2 following the specific objective and target. Specific management strategies associated with individual zones are presented in Section 3.3 Fisheries Management Zones.

3.2 SPECIFIC FISHERIES MANAGEMENT OBJECTIVES, TARGETS AND STRATEGIES

SPORT FISH

Objective:

.To maintain a diversified angling experience and attempt to meet the future angling demand for all species within the limits of sustained yield management.

Target:

.Inland Waters: To satisfy a demand for 262,500 angling opportunities annually, by the year 2000.

.Lake Huron: To satisfy a demand for 67,440 angling opportunities from Lake Huron by the year 2000.

Targets are further refined in Table 3.

Discussion:

Inland Waters

Sport fish targets for inland waters were derived from an analysis of anticipated angler demand and potential annual yields of sport fish. The target for trout species can only be met if all existing coldwater fisheries are managed to meet their maximum potential production, and

Table 3. Sport fish targets for the Espanola District.

Species	Harvest (kg)	Quality Standard kg/angler day	Angler days
Inland Waters			
trout	28,750	0.3	95,825
walleye	25,000	0.5	50,000
others (bass, pike, perch, etc.)	58,338	0.5	116,675
			262,500
Lake Huron			
North Channel			
lake trout backcross	9,960	1.0	9,960
salmon	8,040	1.0	8,040
walleye	17,265	1.0	17,265
others	16,335	1.0	16,335
			51,600
Georgian Bay/Lake Huron			
trout/salmon	8,000	1.0	8,000
walleye	7,457	1.0	7,457
others	383	1.0	383
			15,840
			67,440

if present stocking levels of all coldwater species are maintained. Meeting this target will also depend on the successful establishment of a coldwater sport fishery in South Bay.

The target for walleye reflects the potential supply of this species and is dependent on the successful rehabilitation of a number of former walleye fisheries. Even so, the target is below the anticipated demand for this species.

Projected demand for other species (bass, pike, perch, whitefish) is well below their present supply. The target for these species reflects the portion of total angler demand on inland waters which cannot be met with trout and walleye. Encouraging greater use of these species can help in meeting future demand for sport fishing, or can provide a higher fishing success rate.

Lake Huron

The target for lake trout backcross in the North Channel reflects the potential supply of this species to anglers, while allowing for rehabilitation. The anticipated increase in demand will exceed this supply.

The target for salmon in the North Channel reflects the portion of the demand for coldwater species which cannot be met by lake trout backcross. The target for trout/salmon in Georgian Bay and Lake Huron reflects the projected demand for these species. The demand for salmon and rainbow trout can be met from the existing fishery, and from stocking projects initiated through the Community Fisheries Involvement Program. The Ministry of Natural Resources will not actively manage for salmon in Lake Huron.

The target for walleye in Lake Huron reflects the potential supply of this species and is dependant on the successful rehabilitation of walleye in McGregor Bay and the Bay of Islands. Meeting this target will help fill the demand for walleye which cannot be met from inland lakes.

Projected demand for other species (northern pike, bass, perch) is well below the potential supply from Lake Huron. The target for these species reflects that portion of angler demand for coolwater species which cannot be met with walleye.

Strategies in this Fisheries Management Plan will be directed toward rehabilitating the sport fishery of the North Channel. In the interim, angling opportunities will be available from existing fisheries in Lake Huron and Georgian Bay and may be supplemented with stocking of chinook salmon through the Community Fisheries Involvement Program.

Strategies:

The following strategies relate to managing angler harvest of sport fish.

.Monitor harvest of sport fish by anglers and identify where harvest levels exceed the biological capability of the resource.

- conduct periodic creel surveys on district waters, priority being those lakes known (or suspected) to have heavy angling pressure, or where data is needed to monitor specific management programs (eg. Heywood Island).
- conduct aerial creel surveys on a standard (index) set of district lakes every 5 years to monitor changes in fishing pressure across the district.
- initiate voluntary creel programs on specific lakes by working with tourist outfitters, cottagers' associations and local anglers.
- encourage tourist outfitters to record fishing pressure and harvest on fly-in fisheries.

.Reduce excessive angler harvests by implementing area-specific regulations as necessary, which might include such things as:

- shorten/adjust angling seasons.
- reduce daily catch limits.
- implement minimum size or "slot" size limits.
- implement gear restrictions.
- designate selected areas as sanctuaries.

.Control illegal fishing (overlimits, illegally caught fish).

- continue to enforce all pertinent regulations.
- educate public and encourage them to report poachers.

.Disperse angling pressure to less utilized lakes and/or alternate species.

- promote increased access to district lakes which could support additional angling pressure.
- provide new access points and/or boat launching facilities in suitable locations, through MNR programs or in cooperation with groups or municipalities.
- continue to provide or expand opportunities for "alternate" means of fishing, (eg., bow

and arrow season for coarse fish, smelt fishing with a dipnet or seine, spear fishing for coarse fish).

- promote fishing of underutilized species, through public education.

The following strategies relate to fish stocking programs.

.Optimize the use of hatchery-reared fish.

- stock hatchery-reared fish at appropriate rate, and only where they will give best return to anglers, and/or meet specific management goals (eg. rehabilitation).
- assess contribution of hatchery-reared fish to population through netting, creel surveys.

.Maintain gene pool integrity of local fish populations by stocking native strains of fish where possible.

.Make use of new/alternate methods of fish culture.

- continue to develop technology for cage rearing of trout species.
- expand present cage-culture operation if successful.

.Promote fish culture projects by the public.

- provide monetary incentives, advice and expertise to public interest groups to culture fish (walleye, trout and salmon) through the Community Fisheries Involvement Program.
- encourage construction and use of mini hatcheries and/or streamside incubation boxes.

.Utilize other methods of establishing new fisheries.

- implement adult transfer programs to establish new self-sustaining populations of walleye or bass in suitable lakes.

The following strategies relate to protecting and improving fish habitat and water quality.

.Inventory and assess key fish habitat components on major lakes, rivers and streams.

- identify spawning areas and important feeding and nursery areas, giving priority to lake trout lakes, walleye lakes and coldwater streams, where shoreline development or resource extraction are likely.
- maintain a record of all fish spawning areas.

.Upgrade aquatic habitat inventory base.

- update old lake or stream surveys.
- survey additional lakes and streams.
- update late summer and late winter chemistry (oxygen/temperature) data on lakes managed for coldwater fisheries.

The following strategies relate to the management of fish communities.

.Prevent introductions of undesireable species or introduction of disease to district waters.

- regulate private culture, transfer and release of all fish species.
- restrict the use of live bait in newly stocked waters as required.

- educate public regarding potential impacts of unauthorized introductions.

.Study potential impacts of species introductions.

- encourage research into effects of introduced species, such as smelt, perch and salmon, on native fish populations.
- monitor impacts of species introductions on fish populations.

The following strategies relate to improving public education and awareness.

.Encourage direct public participation in fisheries management through CFIP and/or school projects, etc.

.Prepare a district fisheries communication strategy for improving communications between MNR and the public, and increasing public awareness of district fisheries problems and management programs. For example:

- issue a district newsletter 2 or 3 times annually on a trial basis, with short articles on district fisheries management programs, CFIP programs, as well as general information on fisheries biology and management principles.
- develop active interpretive programs at Provincial Parks and Fish Culture Stations.
- hold "user group" workshops to bring together anglers, tourist outfitters, commercial fishermen, etc.

The following strategies relate to the improvement of fisheries science and technology.

.Ensure research needs of district are met.

- identify research needs within the district and encourage research by MNR and/or outside agencies.
- implement programs at the district level to assess success of specific management programs.
- ensure reseach enhances and contributes to the ongoing management of the resource.

.Make effective use of new knowledge and technology.

- access knowledge and information from other districts and outside agencies.
- make effective use of Provincial system of Fisheries Assessment Units.
- become involved in and/or initiate experimental management projects.
- continually upgrade staff training through participation in short courses, workshops and seminars.

LAKE TROUT

Objective:

.To manage for the survival and maintenance of significant lake trout populations as well as the provision of angling opportunities.

Target:

.To concentrate management efforts on those lake trout lakes with the highest productive and recreational potential.

Discussion:

Lake trout is a popular sport fish with anglers. Although analysis of resource data seems to indicate that the supply of trout is adequate to meet projected demand, this is

dependent on maintaining and improving all existing lake trout fisheries.

Lake trout is a unique and fragile species and special management is often required to ensure its continued existence in inland lakes. Lake trout waters are generally recognized as the least fertile and most fragile aquatic systems to maintain. These lakes are particularly sensitive to environmental stresses imposed upon their ecosystems.

The fact that lake trout are slow-growing, late to mature and produce a relatively small number of eggs makes them particularly susceptible to excessive fishing pressure.

A specific set of strategies have been developed for the management of lake trout.

Strategies:

District strategies for lake trout management will be directed at ensuring the continued viability of all inland lake trout fisheries, and rehabilitating Lake Huron with an appropriate coldwater species.

.Manage all designated lake trout lakes (Appendix I) in accord with the Espanola District Land Use Guidelines.

- manage type A1 and B1 lakes exclusively for lake trout; do not allow additional access or development.
- manage type A2 and B2 lakes for lake trout, giving consideration to other objectives on a case by case basis; development should be designed to have a minimal impact on the aquatic habitat.
- assess and review the classification of district lake trout lakes at 5-year review period and re-classify lakes as necessary.

.Protect habitat and water quality of all designated inland lake trout fisheries through plan input and review.

- ensure that shoreline development or resource extraction (including timber harvesting), in shoreline areas be carried out only in locations and in such a manner, that it will not result in a loss of lake trout habitat or reduced water quality.

.Continue to provide angling opportunities for lake trout.

- stock to maintain, and improve to self-sustaining, those district lake trout lakes which are producing below their biological potential.

COMMERCIAL FISH

Objective:

.To encourage the harvest of commercial fish populations when it is biologically and economically feasible.

Target:

.To maintain an average annual commercial fish harvest for all species in Lake Huron of 0.57 million kg.

Discussion:

In 1985 there were 27 commercial fishing licences operating out of the Espanola District, in the waters of Lake Huron, the North Channel and Georgian Bay.

Commercial fish harvest is regulated throughout the Province by quota management. These quotas were, in

part, based on the past harvest records of the commercial fishermen. The total 1985 quota allocation (all species) for commercial fishermen licensed in the Espanola District was 569,000 kg. Lake whitefish and chub are the mainstay of the commercial harvest.

Quotas have been established for individual species and fishing zones based on the best available information and technology. Quota management will allow commercial harvest levels to be regulated to reflect expanding or declining stocks, and variations in year-class strength and species composition.

Conflicts arise from time to time between commercial and sport fishing when the two groups perceive they are competing for the same limited resource, or when commercial nets interfere with sport fishing equipment. Large stocking programs of both salmon and trout may cause conflicts with commercial fishermen as levels of incidental catch increase. Commercial quotas of chinook and coho salmon are not currently allowed by Provincial policy.

Commercial fishing will continue in the Espanola District at its current level, recognizing its importance as a means of livelihood, its traditional base, and its necessity for a balanced harvest of the fish community.

Strategies:

The commercial fishing strategies are aimed at maintaining a sustained yield within a balanced species community, and working to resolve conflicts between the commercial and sport fisheries. Area-specific strategies may be found under Fisheries Management Zones 1 and 2.

.Continue to manage commercial fish harvest by quota.

- adjust quotas to reflect rising or declining fish stocks.
- licence all commercial fishing by native persons through individual licences and quotas, and manage as other commercial fisheries in the District.
- enforce commercial fishing related acts and regulations to ensure accurate reporting, and to ensure quotas are not exceeded.

.Work with the Lake Huron Assessment Unit to upgrade our assessment data base.

- carry out index netting, commercial catch sampling at district level, as coordinated through the Assessment Unit.
- utilize the commercial fishery to collect assessment data, (eg. index netting, catch sampling).

.Reduce conflicts between the commercial fishery and sport fishery.

- encourage commercial fishermen to voluntarily limit their fishing operations in areas popular for sports fishing, and to mark their nets in a sufficient manner to avoid conflicts with angling gear.
- increase public understanding of the commercial fishing industry through public education programs and user group workshops.

BAITFISH

Objective:

.To manage the district baitfish resource to ensure socio-economical benefits and the maintenance of stable fish communities.

Target:

.To meet demand for an average annual harvest of 25,750 dozen bait fish by the year 2000.

Discussion:

The baitfish industry in the Espanola District is expected to increase at a rate proportional to the increase in angling effort. This would result in an average annual harvest of 25,750 dozen baitfish for the year 2000.

Strategies:

District strategies for baitfish management are directed at providing for a modest increase in baitfish harvest.

.Continue to manage baitfish harvest and sales through licensing.

- continue to licence baitfish areas on the "North Shore" using an exclusive-use block system. On Manitoulin Island, licence specific areas (streams, lakes or parts of) to individual bait fishermen.
- monitor harvest levels through annual baitfish harvest returns.
- encourage accurate harvest records and inspect baitfish dealers facilities on a regular basis.
- ensure that licensed areas are being adequately utilized.

.Increase baitfish production as necessary to meet future demand.

- licence new areas for baitfish harvest.
- allow introductions of baitfish species into waters not capable of supporting sport fish species.
- encourage private aquaculture of baitfish species (eg. suckers).
- develop an extensive program to improve baitfish harvesters' trapping and handling techniques.

3.3 FISHERIES MANAGEMENT ZONES

The Espanola District has been divided geographically into 9 Fisheries Management Zones reflecting such differences as lake productivity, land ownership, proximity to population concentrations and degree of access. These characteristics necessitate a certain set of strategies to resolve the specific problems and issues which may constrain effective fisheries management within that zone.

This section describes the specific set of fisheries management strategies and tactics for each zone.

North Channel Fisheries Management - Ministry Intent

Historically, lake trout was the top predator species in the North Channel; however, the population was eliminated by sea lamprey and over-fishing. With better controls over fishing pressure and the present sea lamprey control program, it is the long-term intent of the Ministry of Natural Resources to re-establish either lake trout or lake trout backcross as the top open-water predator in the North Channel.

In keeping with this intent, the lake trout backcross is being stocked east of Darch Island (Zone 2). Pacific salmon stocking will not be allowed in this area.

There is presently insufficient space at our Provincial hatcheries to begin rehabilitation efforts with lake trout backcross to the west of Darch Island (Zone 1). In the interim, the Ministry of Natural Resources will cooperate with private groups wishing to raise and stock chinook salmon west of Darch Island. It must be realized that an increase in the chinook salmon population in the North Channel will impact on the existing forage base. This will adversely affect the commercial fishing industry and, therefore, an agreement concerning commercial catches of chinook salmon should be worked out.

Along with the management of open-water top predators, the Ministry of Natural Resources will manage for other native sport species where they occur or where they have historically occurred.

Zone 1 - Lake Huron, Georgian Bay, west end North Channel

A. Area Description

This area represents the North Channel of Lake Huron, west of Darch, Innes and Clapperton Islands, and the area of Lake Huron around Cockburn Island, and south and east of Manitoulin Island. The area does not include any of the mainland of Manitoulin Island and does not include Bayfield Sound or South Bay.

The major existing use of the area's fishery resource is through commercial fishing. Sport fishing occurs mainly in the near-shore areas, around the islands of the North Channel, and in the bays along the shoreline of Manitoulin Island. Deep-water fishing for salmon is becoming increasingly popular off the south shore of Manitoulin Island and in the Mississagi Strait. Providence Bay and Michaels Bay provide important sports fisheries for salmon and rainbow trout.

B. District Land Use Guidelines

The Ministry of Natural Resources will manage this area primarily for fish production, for both the commercial fishery and for anglers. The growing importance of Lake Huron to the tourist industry will be recognized, and crown land disposition for resource development and tourism purposes may be permitted (D.L.U.G.).

C. Problems and Issues

-lack of a top coldwater predator species.
-loss of balanced fish community.
-inability to effectively control sea lamprey in St. Mary's River.
-conflicts between commercial and sport fisheries.
-commercial fishermen cannot avoid incidental catch of salmon; yet no legal quota for chinook or coho salmon.

D. Fisheries Management Strategies and Tactics

.Long-term strategy is to rehabilitate the coldwater fishery with lake trout or lake trout backcross.

.Provide interim coldwater angling opportunities with chinook salmon.

-allow the culture and stocking of chinook salmon through the Community Fisheries Involvement Program at the following sites:

Meldrum Bay
Providence Bay
Michaels Bay
Srigley Bay
Lake Huron at South Baymouth

.Continue to manage commercial fish harvest by quota.

.Investigate the feasibility of allowing a commercial quota for incidental catches of salmon.

.Encourage and support Federal sea lamprey control program.

-collect and record information regarding wounding and scarring rates.

-support and encourage lampricide treatments where needed.

Zone 2 - The Eastern North Channel

A. Area Description

This management zone covers the majority of the North Channel of Lake Huron - running from Aird and Darch Islands on the west to the Heywood Island area on the east, and includes the Bay of Islands, McGregor Bay and Manitowaning Bay. The major existing use of this area is recreation.

The North Channel is recognized as a world class boating area, and it is generally acknowledged that an excellent angling fishery could also be developed. This area is included within the North Georgian Bay Recreation Reserve.

Sport fishing for northern pike, yellow perch and smallmouth bass in the North Channel occurs mainly in the near-shore areas. The Bay of Islands and McGregor Bay support sport fishing for northern pike, muskellunge and smallmouth bass. These areas formerly supported walleye populations as well.

The Heywood Island area has recently begun to provide a sport fishery for lake trout backcross as the result of a rehabilitative stocking program.

An experimental program to rear lake trout backcross in cages is operating at Swift Current Bay. The design of the proposed Blue Jay Hatchery will depend on the success of this cage culture operation.

Iroquois Bay supports one of the last remaining populations of native Lake Huron lake trout. Natural recruitment appears to be very limited in this population.

Shallow Bay on Great LaCloche Island is the source of smallmouth bass eggs for Sandfield Hatchery.

Commercial fishing is ongoing in the North Channel, and Manitowaning Bay. McGregor Bay, the Bay of Islands and other specific portions of this area are closed to commercial fishing. One commercial gillnet licence has been purchased by the Ministry of Natural Resources as there was potential for large incidental catches of lake trout backcross, and resulting conflicts with the sport fishery.

B. District Land Use Guidelines

Ministry management efforts will be primarily directed towards maintaining the status quo in this area, with recreation remaining the primary and most important use of this area. The area is of particular importance to the tourist industry. There will normally be no disposition of Crown land in the North Channel area.

C. Problems and Issues

-lack of a top coldwater predator species in North Channel.
-loss of balanced fish community.
-decline of native lake trout population in Iroquois Bay and angler over-harvest.
-loss of former walleye fisheries: McGregor Bay, Bay of Islands, Strawberry Channel.
-limited sport fishing opportunities.
-high potential for incidental

commercial catch of lake trout backcross; conflicts between sport and commercial fisheries.

D. Fisheries Management Strategies and Tactics

.Rehabilitate coldwater fishery in North Channel with lake trout or lake trout backcross.

- -stock lake trout backcross annually in the following locations:

  Heywood Island - 200,000
  Gore Bay/Darch Is. - 100,000
  Bedford Is. - 200,000

- -assess stocking program through monitoring of angler harvests and limited assessment netting to determine return to the sport fishery, occurrence of natural reproduction, growth rates and longevity of stocked fish.

.Continue cage rearing of lake trout backcross in Swift Current Bay.

.Protect and rehabilitate, if possible, the native lake trout population of Iroquois Bay.

- -collect spawn from Iroquois Bay annually and re-stock 3000 yearling fish.
- -establish a fish sanctuary on Iroquois Bay from January 1st to the first Saturday in March annually to reduce angler harvest.
- -monitor March harvest to assess effectiveness of winter sanctuary in reducing harvest levels.

.Rehabilitate former walleye fisheries.

- -continue to stock McGregor Bay with walleye fry and fingerlings through CFIP programs.
- -assess success of CFIP walleye program through creel survey and/or assessment netting.
- -expand CFIP program (if successful) to stock walleye in Bay of Islands or Strawberry Channel.

.Assess other cool and warmwater fisheries (bass, pike, muskie) in North Channel and develop strategies to enhance these fisheries if necessary.

.Maintain Shallow Bay as year-round sanctuary to provide continued source of smallmouth bass eggs for the Provincial Fish Culture System.

.Continue to manage commercial fish harvest by quota.

.Minimize conflicts between the sport fishery and commercial fishery by:

- -purchase commercial gillnet licences in specific contentious locations as they become available.
- -allow commercial fishing in Manitowaning Bay only from June to December to minimize incidental catch of lake trout backcross.

Zone 3 - Manitoulin Island

A. Area Description

This zone encompasses Manitoulin and Cockburn Islands and includes Bayfield Sound and South Bay. Most land is patented. The major existing land uses are related to agriculture, recreation and tourism. Aggregate extraction and forest management also occur.

Lake Manitou is a Provincially significant lake trout lake, both as a sports fishery and as a source of lake trout spawn for the Provincial fish culture program. Mindemoya and Kagawong Lakes provide the major summer fishery for warmwater species. Wolsey Lake and Bayfield Sound provide an important winter and spring

fishery for yellow perch.

Blue Jay Creek is the site of a new fish hatchery which is proposed for construction in the next few years.

District creel surveys indicate that as many as 90% of summer anglers on the larger lakes are commercial guests of tourist outfitters. Many of the smaller lakes are also locally important to both resident anglers and commercial guests.

Salmon and trout fishing in Manitoulin Island streams is becoming increasingly important to the tourist industry as well as to local fishermen. Catchable-size brook or rainbow trout are stocked in the Kagawong River below Bridal Veil Falls.

B. District Land Use Guidelines

The Ministry of Natural Resources' intent for this zone is to recognize and support the existing activities. The primary management efforts of the Ministry will be directed towards supporting management of privately owned agricultural lands, good quality aggregate resources and high capability recreational areas. Fisheries management will be a Ministry priority in Lake Manitou, the Manitou River and Blue Jay creek.

C. Problems and Issues

-potential for loss of fish habitat or water quality from shoreline development, agricultural practices, land drainage practices.

-decline of native brook trout fisheries in some streams; possible deterioration of habitat.

-water level manipulations: Manitou, Mindemoya, Kagawong, Bass, Big Lakes.

-enforcement problems during rainbow trout and salmon runs.

-continuing loss of public access to coldwater streams.

-lack of a coldwater sport fishery in South Bay.

-limited early spring fishing opportunites (eg. walleye).

-importance of sport fishing as basis for tourist industry.

D. Fisheries Management Strategies and Tactics

.Protect fisheries habitat and water quality in lakes and coldwater streams.

- -review all applications for shoreline alterations, stream crossings or diversions, drainage works, subdivisions, severances, etc. to ensure they will have minimal impact on fisheries habitat.
- -enforce appropriate legislation (Lakes and Rivers Improvement Act, Fisheries Act) to prevent habitat degradation.
- -review agricultural drainage plans and work with Ministry of Agriculture and Food, and landowners to employ appropriate mitigative measures.
- -encourage landowners to protect streams by fencing livestock, leaving streamside vegetation.
- -encourage projects by individuals and groups to rehabilitate stream habitat as required.

.Minimize negative impacts of water level manipulation.

- -work with water level control agencies to ensure water management plans for all dams (MNR and private) contain provisions to protect fish habitat and spawning areas on managed waterbodies.

.Protect spawning trout and salmon.

- -enforce pertinent regulations.
- -implement gear restrictions

if appropriate.

-maintain spring sanctuaries on Blue Jay Creek and Manitou River to protect spawning rainbow trout.

-establish fall sanctuaries to protect major spawning runs of salmon.

.Secure public access to coldwater stream fisheries.

-work with municipalities and landowners to investigate best means of securing public access over the long-term.

.Provide a coldwater angling fishery in South Bay.

-continue to stock 15,000 lake trout plus 15,000 lake trout backcross annually in South Bay.

-assess relative success of these 2 species (paired plants).

.Provide increased angling opportunities for walleye.

-attempt to establish walleye in Lake Kagawong through CFIP stocking or adult transfers.

-if fingerling stockings prove successful, expand CFIP programs to stock other locations such as Wolsey Lake and Bayfield Sound.

-assess spawning habitat in these areas and rehabilitate or create new spawning beds as necessary.

.Continue to stock catchable-size brook trout or rainbow trout in Kagawong River below Bridal Veil Falls to provide immediate returns to anglers.

.Ensure Lake Manitou continues to provide both an important angling fishery for lake trout and a source of lake trout spawn for the Provincial fish culture program.

-protect habitat and water quality through plan review.

-continue to stock 60,000 lake trout annually.

-continue to monitor angler harvest of lake trout to ensure harvest levels remain within biological capability of the lake.

.Ensure water quality of Blue Jay Creek remains suitable as a site for future fish culture station.

Zone 4 - Highways 6 and 17 Corridors

A. Area Description

Zone 4 includes the mainland area lying north of the North Channel, to and including Birch, Agnew and Bellows Lakes. It includes the majority of the patented land on the North Shore of the Espanola District and associated population centres.

This zone contains concentrations of both coldwater and warmwater lakes and includes 22 lakes which are stocked with various trout species (Appendix 2).

Most lakes are road accessible and are heavily used by both local residents of the area and by commercial guests. District creel surveys show that approximately 60% of angling pressure on the larger lakes (Agnew, Birch, LaCloche) is associated with the tourist industry.

B. District Land Use Guidelines

In this area management efforts will be directed towards maintaining a reasonably balanced multiple-use area. On the land base, primary activities will include forestry, mining and aggregate extraction. On the water base, primary emphasis will be allocated to commercial tourism and recreation. The need to provide sufficient water resources

for energy production at the existing dam sites will also continue to be a Ministry management objective.

C. Problems and Issues

-high demand for angling opportunities close to population centres.

-loss or decline of many former walleye fisheries.

-5 lakes have been classified as either acidified or extremely sensitive to acidification.

-effluent from pulp and paper mill previously posed constraints to fisheries management in lower Spanish River; water quality has improved.

-planned crown land timber harvesting in some shoreline areas.

-potential for some private shoreline development.

-water level manipulation: Agnew, Birch, Panache, Lang, Frood, Evangeline, Apsey, Tube Lakes and the Spanish River.

-possibility of some water contamination from abandoned mine mill tailing dumps (Ministic Creek - Hyman Twp., House Lake - Mongowin Twp.)

D. Fisheries Management Strategies and Tactics

.Rehabilitate former walleye fisheries.

-continue to rear walleye through CFIP to stock in:
Lang Lake chain
Sugar Lake
Walford Pond.

-assess spawning habitat in above lakes and, if necessary, rehabilitate as part of a CFIP project.

-assess success of rehabilitation through creel, assessment netting.

.Manage lower Spanish River to provide a river-based sport fishery.

-stock one million walleye fry annually as part of a 3-year program ending in 1986.

-establish a temporary (3-year) early season walleye closure (Oct. 1 to 3rd Sat. in May) to further ensure the rehabilitation of this fishery.

-establish a permanent year-round sanctuary between the Highway 6 bridge and E.B. Eddy dam, to protect breeding stock.

-investigate the feasibility of improving walleye spawning habitat in the Aux Sables River at Massey.

-Continue to stock lake, brook, rainbow trout and F_1 splake in appropriate lakes (Appendix 2).

.Continue to stock catchable-size brook trout or rainbow trout in the Aux Sables River at Chutes Park to provide immediate returns to anglers.

.Protect fish habitat and water quality in district lakes and streams.

-review all applications for shoreline alterations, stream crossings or diversions, subdivisions, severances, etc. to ensure they will have minimal impact on fish habitat.

-enforce appropriate legislation (Lakes and Rivers Improvement Act, Fisheries Act) to prevent habitat degradation.

-review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

-assess effectiveness of past modified timber management practices by monitoring changes

in the fish community or habitat.

.Continue to monitor pH and alkalinity of acid sensitive lakes. Assess viability of their fisheries and rehabilitate where possible.

.Minimize negative impacts of water level manipulation.

-work with water level control agencies to ensure water management plans for all dams (MNR and private) contain provisions to protect fish habitat and spawning areas on managed waterbodies.

.Continue to work with MOE to monitor and protect water quality from pollution or contamination.

.Develop a more detailed set of management strategies for Zone 4, in consultation with anglers, cottagers, tourist operators, Game & Fish Clubs.

Zone 5 - Whiskey Lake - Serpent River

A. Area Description

Zone 5 includes parts of Lehman, Lockeyer, Gaiashk and Gerow Townships and is centered around a concentration of lakes in the Serpent River watershed and surrounding area. Lakes in this zone receive heavy fishing pressure from local anglers both summer and winter. Road access to lakes in this zone is limited, although the area is easily accessed by snowmobile from Elliot Lake.

Currently the district stocking program includes 10 lakes in this zone (Appendix 2).

Commercial tourism in this zone is centered mainly on East Bull Lake. Whiskey and Wiggly Lakes are also locally important to the tourist industry. Wiggly Lake is a designated tourism lake (Appendix 3).

B. District Land Use Guidelines

Ministry of Natural Resources' programs in this area will be primarily aimed at supporting such commercial and industrial activities as tourism, mining and forestry. Crown land disposition will be considered for such things as resource development, commercial tourism and recreation purposes, on a site-specific basis.

C. Problems and Issues

-previous contamination from a uranium mine in Elliot Lake constrained fisheries management in Whiskey Lake and Serpent River system although improved water quality has resulted in some success in rehabilitation of fisheries.

-accidental/unauthorized introduction of smelt to East Bull Lake may limit successful natural recruitment of lake trout.

-local anglers feel heavy year-round fishing pressure has caused a decline in fisheries, and resulted in only mediocre angling.

-some crown timber harvesting planned for 1900-2000 in Whiskey and Wiggly Lake areas.

D. Fisheries Management Strategies and Tactics

.Cooperate with Blind River District in rehabilitating the fisheries of the Serpent River system to restore the native fish community.

-continue to stock lake trout in Whiskey and Kindle Lakes.

-re-establish a walleye fishery in Whiskey Lake once lake trout are established.

.Monitor the effects of smelt on the lake trout population in East

Bull, by assessing natural recruitment, return to anglers and contribution of hatchery fish to the creel.

.Work with tourist outfitters, cottagers associations and local anglers to develop new management strategies for lakes in this zone.

- -initiate voluntary creel program on Zone 5 lakes to collect data on use and angler harvest.
- -initiate innovative area-specific management to maximize return to anglers; (eg. pulse-fishing, stocking followed by rotating closures, seasonal closures).
- -continue to stock lake trout and brook trout in appropriate lakes (Appendix 2).
- -identify new lakes for stocking of brook trout, rainbow trout or splake.

.Protect fish habitat and water quality through appropriate plan input and review.

- -review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

.Ensure that timber harvesting does not result in improved road access and increased angling pressure.

- -as much as possible, ensure that new primary, or permanent secondary access roads are not built such that they would provide increased road access to these fisheries.

Zone 6 - Spinwebb Lake Area

A. Area Description

This zone includes parts of Poncet and Plourde Townships, locally known as Plaunt's Cut, and is accessed from the Massey Tote Road (Hwy 553). The area is the site of a concentration of small trout lakes, including 8 lake trout lakes. As well, this area provides part of the head waters for the West Sables River. This zone is within the boundaries of the Lower Spanish Forest Management Agreement Area with E.B. Eddy Forest Products Ltd.

The Spinweb Lake area provides a higher concentration of recreational use than does the surrounding area. A network of roads throughout this zone provides easily-accessible road-based recreation. The area receives steady fishing pressure both summer and winter and maintains a high-quality sport fishery. The majority of fishing in the area is from local anglers. The area's lakes are easily accessed by snowmobile from the town of Elliot Lake.

Bell, Deschamps and Tip Top Lakes are designated tourism lakes and are not presently road accessible (Appendix 3). Lake #18 (Plourde) is stocked with brook trout (Appendix 2).

B. District Land Use Guidelines

The Ministry of Natural Resources' intent for this zone is to provide a quality, road accessible recreational landscape, as well as to maintain a quality wood production area. Most other natural resource uses will also be permitted; in particular, efforts will be made to maintain fish and wildlife population levels.

C. Problems and Issues

- -district aerial creel surveys indicate most lakes currently fished to capacity.
- -crown timber harvesting planned for 1995-2000 in east half Plourde township; several lakes may be

affected including Tip Top lake.

-Tip Top and Robert Lakes rated as extremely sensitive to acid precipitation.

D. Fisheries Management Strategies and Tactics

.Continue to stock brook trout in Lake #18 (Plourde) on a put-grow-take basis.

.Protect fish habitat and water quality through appropriate plan input and review.

- -review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

.Ensure that designated tourism lakes are maintained as remote fisheries.

- -modify or restrict timber harvesting and other resource extraction programs in shoreline area of Tip Top lake to minimize aesthetic impacts and noise.
- -as much as possible ensure that new access roads do not provide unacceptable road access to Tip Top lake.

.Continue to monitor the pH and alkalinity of Tip Top and Robert lakes, and viability of their fisheries.

Zone 7 - Mozhabong Lake Area

A. Area Description

Zone 7 includes parts of Del Villano, Hotte and Ouellette Townships and encompasses the area of Mozhabong, Sinaminda and Shakwa Lakes. Access to this zone is via the West Branch, a forest access road running north of Webbwood. The area includes a concentration of trout lakes, as well as several small pike lakes. The Agnes River supports both cold and warmwater species. This zone is within the boundaries of the Lower Spanish Forest Management Agreement Area with E.B. Eddy Forest Products Ltd.

The Mozhabong Lake area provides a higher concentration of recreational use than does the surrounding area. A network of roads throughout this zone provides easily-accessible road-based recreation. The area receives steady fishing pressure both summer and winter. It is a quality day-use area, with the majority of fishing pressure originating from resident anglers.

Mile Lake is a designated tourism lake (Appendix 3). The district stocking program includes 7 lakes in this zone (Appendix 2).

B. District Land Use Guidelines

The Ministry of Natural Resources' intent for this zone is to provide a quality, road accessible recreational landscape, as well as to maintain a quality wood production area. Most other resource uses will also be permitted; in particular, efforts will be made to maintain fish and wildlife population levels.

C. Problems and Issues

-district aerial creel surveys indicate most lakes receive heavy fishing pressure.

-Mozhabong, Charcoal and Gilbert Lakes have been classified as extremely sensitive to acidification.

-water level manipulation: Mozhabong, Sinaminda Lakes.

-crown timber harvesting planned:
1990-1995 in Shakwa, Charcoal and Hider Lake areas.
1995-2000 in northeast corner of zone and large area from Mozhabong to Shakwa Lake.

D. Fisheries Management Strategies and Tactics

.Continue to stock lake, brook and rainbow trout in appropriate lakes.

.Continue to monitor pH and alkalinity of acid sensitive lakes and viability of their fisheries.

.Minimize negative impacts of water level manipulation.

-work with water level control agencies to ensure water management plans for all dams contain provisions to protect fish habitat and spawning areas on managed waterbodies.

.Protect fish habitat and water quality through appropriate plan input and review.

-review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

.Ensure that Mile Lake (designated tourism lake) is maintained as a remote fishery.

-modify or restrict timber harvesting and other resource extraction programs in shoreline area of Mile Lake to minimize aesthetic impacts and noise.

-as much as possible, ensure that new access roads do not provide unacceptable road access to Mile Lake.

Zone 8 - Sables - Bark Lakes

A. Area Description

Zone 8 is centered on Fontaine and the north half of Lefebvre Townships. The boundaries of the zone follow the Lac Aux Sables - Bark Lake canoe route, including a 120 m area on the outside of the route.

This is a compact area containing two large trout lakes and several small ones, most connected by waterways or portage trails. The lakes in this zone are not road accessible. The area receives moderate fishing pressure in spring and summer. Winter fishing pressure is heavy when the Massey Tote Road is plowed to Ritchie Falls.

The majority of fishing pressure comes from local anglers. Little Trout, Five Star, Little Touch, Sportsman and Frying Pan lakes are used by guests of the commercial tourist outfitters, particularly for spring fishing. There are 6 designated tourism lakes in this zone (Appendix 3). Frying Pan lake is stocked with brook trout on a put-grow-take basis.

B. District Land Use Guidelines

It is the intention of the Ministry of Natural Resources to manage this area for low density, limited road access, recreational uses. Most other natural resource uses will be permitted provided this primary intent is not impaired. Road access to this area will be closely regulated and public use of the road system may be restricted or prohibited.

C. Problems and Issues

-crown timber harvesting planned for 1995-2000 throughout majority of this zone; proposed access road to Big Trout Lake area 1990.

-Big Trout lake classified as acidified; however, some lake trout reportedly being caught.

-Boumage, Long and Five Star Lakes classified as extremely sensitive to acid precipitation.

-Brown Lake formerly managed as trophy put-grow-take brook trout fishery; yellow perch have recently become established.

D. Fisheries Management Strategies and Tactics

.Protect fish habitat and water quality through appropriate plan input and review.

- -review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

.Ensure that designated tourism lakes are maintained as remote fisheries.

- -modify or restrict timber harvesting and other resource extraction programs in shoreline areas of designated tourism lakes to minimize aesthetic impacts and noise.

.Maintain remoteness of the lakes in this zone.

- -as much as possible, ensure that new primary, or permanent secondary access roads are not built such that they would provide unacceptable road access to these fisheries.
- -consider restricting public access on those new roads which unavoidably access lakes, and remove or make impassible these roads when they are no longer needed for forestry operations.

.Continue to monitor the pH and alkalinity of acid sensitive lakes and assess viability of their fisheries.

.Update alkalinity testing on Big Trout Lake and assess natural lake trout reproduction.

.Continue to stock brook trout in Frying Pan lake on a put-grow-take basis.

.Consider stocking F_1 splake in Brown Lake to provide a put-grow-take fishery.

Zone 9 - The West Branch

A. Area Description

This large area includes the majority of the Crown land base of the Espanola District and is drained by three major rivers: the Spanish, the Wakonassin and the Aux Sables. Both coldwater and warmwater lakes are scattered throughout this zone and 31 lakes are stocked with lake, brook, rainbow trout or splake (Appendix 2). Access to this zone is by either the Massey Tote Road (Highway No. 553) or the West Branch road.

This area contains a large portion of the Lower Spanish Forest Management Agreement Area and has traditionally been a major source of wood fibre. Commercial tourism and extensive Crown land recreation are also common uses. The majority (35) of the District's designated tourism lakes are found in this zone (Appendix 3).

B. District Land Use Guidelines

The primary purpose for this area is economic resource development, in particular logging and commercial tourism. Most natural resource uses are permitted and the maintenance of the existing environmental quality and acceptable levels of fish and wildlife populations will be a management goal.

C. Problems and Issues

-lack of walleye angling opportunities.

-water level manipulation: Ritchie Falls.

-Lake #97 (Beebe) and Splake Lake classified as acidified; 9 lakes classified as extremely sensitive to acid precipitation.

-Crown timber harvesting planned 1985-2000 throughout large portions of zone.

D. Fisheries Management Strategies and Tactics

.Manage for a diversity of angling experiences in this zone.

- -continue to stock lake, brook, rainbow trout and F_1 splake in appropriate lakes.
- -identify new candidate lakes for stocking of brook trout, rainbow trout or splake.
- -investigate feasibility of introducing walleye to some suitable northern lakes through adult transfers.

.Develop a strategy to maintain varying degrees of access to lakes in this zone.

- -identify those fisheries where better road access will be encouraged, to direct more angling pressure, or provide new angling opportunities.
- -identify those fisheries where increased road access would result in excessive harvest levels, or would jeopardize a "remote" fishery.
- -request that temporary roads be rendered inoperative when intended uses are fulfilled, where it is desired to make a fishery less road accessible for tourism purposes.

.Continue to monitor the pH and alkalinity of acid sensitive lakes, and assess viability of their fisheries.

.Protect fish habitat and water quality through appropriate plan input and review.

- -review all timber harvesting plans and request modified or restricted harvesting operations in shoreline areas as necessary.

.Ensure that designated tourism lakes are maintained as remote fisheries.

- -modify or restrict timber harvesting and other resource extraction programs in shoreline areas of designated tourism lakes to minimize aesthetic impacts and noise.
- -as much as possible, ensure that new access roads do not result in unacceptable road access to designated tourism lakes.

4. IMPLEMENTATION

4.1 GENERAL

This fisheries management plan provides the direction for fisheries management within the district to the year 2000. The strategies identified will be implemented through:

.the preparation of a 5 year implementation schedule identifying specific tactics necessary to meet the targets and strategies set out in this management plan;

.specific projects and programs funded and approved through the Ministry's work planning process;

.projects funded under various special fisheries programs;

.participation in the planning and undertaking of projects/activities of other programs within the Ministry;

.involvement in the review of project or development proposals of other government agencies and the private sector where the Ministry of Natural Resources has the opportunity to review such proposals; and

.co-operative management efforts with clubs, associations, or municipalities.

All district fisheries management activities will contribute toward attainment of the objectives and targets identified in this management plan and generally be consistent with the strategies and tactics identified herein. Annual work plans will reflect the tactics and priorities established in this management plan.

Responsibility for the preparation of the Fisheries Management Plan has been assigned to the District Manager while responsibility for its approval rests with the Regional Director. The plan wil be reviewed at 5 year intervals or whenever major revisions are necessary. Significant modifications will follow the same approval process as the original document.

Approved changes will be reflected in the District Land Use Guidelines and likewise, the Fisheries Management Plan may be amended to reflect major revisions to the District Land Use Guidelines.

Fisheries management projects to be undertaken in accordance with the Plan are subject to the requirements of the Environmental Assessment Act.

4.2 5-YEAR IMPLEMENTATION SCHEDULE

Management tactics have been developed for each strategy and the following tables identify those tactics which the Espanola District plans to carry out during the 1986-1990 period. In some cases, further assessment is required prior to the implementation of tactics. Timing of projects will be identified in annual work plans.

Fisheries management tactics have been priorized into 3 broad groups. The first group is Non-Discretionary Tactics. These can be considered the basic management program which must be carried out on a regular basis, regardless of what other strategies are implemented. This group includes essential programs such as:

- enforcement
- plan review
- licensing and quota setting for commercial fishermen
- providing general public information

The second category is Routine Tactics or those management programs that are carried out on a routine basis, although not necessarily annually. These programs are necessary if the objectives and targets of this Fisheries Management Plan are to be met and can normally be carried out with existing levels of staffing and funding. This group includes such programs as:

- fish stocking and assessment
- lake and stream surveys
- creel surveys
- rehabilitation of fish stocks/habitat

The third category is Enhanced Management Tactics, or those management programs which are carried out as additional staffing and funding are available. Although not essential to the continued management of the district's fisheries, they can provide for more effective management, or more diverse fishing experiences. This group includes such tactics as:

- special area-specific management
- stocking alternate species
- detailed habitat inventories
- special assessment studies (tagging/netting)

This category may also include routine tactics, but at a more intensive level of management, or at a greater frequency.

Implementation Schedule 1986 - 1990

Tactic	Non-Discretionary	Routine	Enhanced	Relationship to Objectives of Fisheries Management Plan
Enforcement				
- Conservation Officers will enforce all pertinent acts and regulations	x			- protect fish populations and habitat
- Deputy Conservation Officers will assist during peak times			x	- make effective use of officers
Plan Review				
- review internal and external plans for shoreline alterations or development	x			- protect habitat and water quality
- review and provide input to timber management operational plans	x			- protect habitat and water quality
- identify all fisheries "areas of concern" for 1990-1995 timber operational plans		x		- protect habitat and water quality
- collect site-specific habitat information for "areas of concern"; priority being coldwater fisheries and significant warm-water fisheries within allocated cutting areas			x	- provide more detailed up-to-date data for integrated resource management
- assess effectiveness of modified timber management practices in protecting fish habitat				- ensure habitat is being effectively protected
- through pre- and post-cut inspections, monitor changes in habitat, water quality and fish populations				- allow refinement of management guidelines for areas of concern
- extensive - general assessment		x		
- intensive - site-specific detailed assessment locations to be identified from Timber Operational Plans			x	
Contaminant Monitoring				
- collect fish from Lake Huron for contaminant monitoring annually	x			- ensure public health
- species collection sites as per Lake Huron contaminant monitoring plan				

Collection Sites	1986	1987	1988	1989	1990
Little Current Area	Whitefish Walleye	Splake S.M.Bass	Y. Perch	Whitefish	Splake Walleye
Burnt Isl. Manitoulin	Carp Whitefish L.Trout R.Trout Burbot	Catfish Chub Chinook	Carp L.Trout R.Trout	Catfish Chinook Whitefish Burbot	Carp Chub L.Trout R.Trout

Public Education				
- answer public inquiries and disperse information on request	x			- provide public with basic information
- give presentations to clubs, school groups, scouts, etc.		x		- improved public awareness of M.N.R programs
- hold user-group workshops with commercial fishermen, anglers, tourist outfitters, as required to resolve conflicts, or develop area-specific management tactics		x		- reduce conflicts between groups - gain support for new management programs
- develop a more intensive public information and education program, eg. quarterly newsletter			x	- improve level of public education and awareness

Tactic	Non-Discretionary	Routine	Enhanced	Relationship to Objectives of Fisheries Management Plan
- develop active interpretive programs through Provincial Parks and Fish Culture Stations			x	- improve level of public education awareness
Fish Stocking				
- stock lake trout backcross				- rehabilitate Lake Huron with a cold-water fishery
- Heywood Island		x		
- Gore Bay/Darch Island		x		- provide coldwater angling opportunities at a higher quality standard
- South Bay			x	
- Bedford Island			x	
- assess lake trout backcross program at Heywood Island				- determine success of rehabilitation - monitor angler harvest
- summer and/or winter creel surveys every 2nd year		x		
- limited assessment netting annually			x	
- collect spawn from Iroquois Bay annually for rehabilitative stocking		x		- rehabilitate Iroquois Bay with native lake trout stock
- continue rehabilitation stocking of inland lake trout lakes: Bellows, Clear, Florence, Kindle, Long, Loon, Madawanson, Round, Whiskey		x		- re-establish self-sustaining lake trout populations in inland lakes
- continue maintenance stocking of inland lake trout lakes Bull, Elizabeth, Folson, Kecil, Manitou, Marian, Millen, Ortona, Rushbrook, Shakwa, Snapshot, South Bay, Walker		x		- supplement established self-reproducing lake trout populations where environmental conditions limit the level of recruitment below that required to sustain the population
- continue to stock brook trout, rainbow trout and F_1 splake in inland waters		x		- provide a diversity of angling opportunities for coldwater fisheries
Brook Trout				
Black, Boundary, Brown, Charles, Clear, Elbow, Fry Pan, Gable, Gaetano, Gordon, Hone, Lake of the Mountain, Len, Marion				
May, McKiggan, Mile, 55 Mile, Moreland, Nameless, Rock, S, Sheon, Shoe, Spec, Streich, Supple, Tarsan, Tilt				
Tiplady, Tomasina, Walton, Weasel, Wrights, #8 (Lockeyer), #8 (Nairn), #13 (Lockeyer), #15 (Rowat), #16 (Oshell), #17 (Prescott), #18 (Plourde), #18 (Rowat), #20 (Nairn), #64 (Hotte)				
Rainbow Trout				
Beaver, Hanwood, Georgia				
F_1 Splake				
Little Long, Long (Gough), Pleasant				
Splake, Spring				
#78 (Gervais), #97 (Beebe)				
- stock catchable-size brook or rainbow trout (as available) - Aux Sable River at Chutes Prov. Park - Kagawong River at Bridal Veil Falls		x		- provide immediate returns to anglers from a put-and-take fishery
- identify 2 new lakes for inland rainbow trout stocking in Zones 4-9			x	- increase diversity of coldwater angling opportunities
- identify 4 new lakes for inland F_1 splake stocking in Zones 4-9			x	- increase diversity of coldwater angling opportunities

Tactic	Non-Discretionary	Routine	Enhanced	Relationship to Objectives of Fisheries Management Plan
- assess stocking programs - assessment netting - 3 lakes/yr Little Long, Gable, Beaver; Spring, Gaetano, Hanwood; Camera, Hone; Moon, McKiggan; Brown, Sheon		x		- ensure best use of hatchery fish
- creel survey/random checks 5 stocked lakes/yr			x	- ensure best use of hatchery fish
- encourage private mini-hatcheries to culture chinook salmon through CFIP for stocking in Lake Huron and the North Channel west of Darch Island: - Meldrum Bay - Providence Bay - Michaels Bay - Srigley Bay - Lake Huron at South Baymouth			x	- provide increased angling opportunities from Lake Huron - provide a diversity of angling opportunities
- stock one million walleye fry in lower Spanish River annually until 1986		x		- rehabilitate lower Spanish River walleye fishery
- continue present walleye rearing/stocking under CFIP: - Lang Lake chain (Lang, Hannah, Walker, Bear) - Walford Pond - Sugar Lake - McGregor Bay		x		- rehabilitate former walleye fisheries - increased angling opportunities for walleye/public involvement in fisheries
- assess success of CFIP walleye rehabilitation - assessment netting beginning in 3rd year of stocking - Lang Lake chain - McGregor Bay - Sugar Lake		x		- determine success of walleye stocking and return to anglers
- creel census after 5 years of stocking - Lang Lake Chain - McGregor Bay			x	
- initiate new CFIP walleye programs, as egg source is available - Kagawong Lake - Wolsey Lake/Bayfield Sound - Strawberry Channel			x	- increased angling opportunities for walleye
- identify 2 lakes in Zone 9 for possible walleye introductions (adult transfers)			x	- increased angling opportunities for walleye/public involvement in fisheries - tourism opportunities for fly-in walleye fishing
Access				
- develop an access strategy for district lakes in consultation with other services			x	- direct fishing pressure to underutilized lakes/maintain other remote fisheries
- investigate most effective way of providing access to Manitou River, Mindemoya River, Blue Jay Creek and Michaels Bay			x	- ensure angling opportunities
User Surveys				
- creel census on major district fisheries summer or winter - 1 lake/year - 2 lakes/year priority being: Heywood Island, Iroquois Bay, Lake Manitou, Spanish River, Lang Lake chain, McGregor Bay, West Bay Panache		x	x	- monitor angler harvests, C.U.E., age class of catch, provide trend-through-time data

Tactic	Non-Discretionary	Routine	Enhanced	Relationship to Objectives of Fisheries Management Plan
- conduct an aerial creel survey on 1982 index set of district lakes - once during 5 years			x	- monitor changes in district-wide angling pressure - provide measure of achievement of Management Plan targets
- collect voluntary creel returns from tourist outfitters on designated tourism lakes			x	- provide data on pressure/harvest from fly-in fisheries
Harvest Control				
- enforce existing regulations - seasons, creel limits	x			- protect fish stocks from over-harvest
- establish fish sanctuaries				- protect fish stocks
- to protect degraded or sensitive fish stocks - Iroquois Bay - Spanish River		x		- maintain harvest within sustainable yield
- to protect spawning runs of rainbow trout, salmon		x		
- maintain Shallow Bay sanctuary to provide a source of bass spawn for Sandfield Hatchery	x			- ensure continued source of smallmouth, bass for fish culture and stocking
- implement area-specific regulations to reduce harvest as necessary			x	- maintain harvest within sustainable yield
- develop a set of special, area-specific strategies for Zone 5, in consultation with anglers cottagers, tourist operators			x	- provide a higher quality angling experience
- assess effectiveness of harvest control measures, through creel, assessment netting, monitoring spawning runs, etc.			x	- ensure effectiveness of tactics in meeting objectives
Habitat Assessment				
- conduct lake surveys - 10 lakes/year - do complete surveys on unsurveyed coldwater lakes or large warmwater lakes: Jeanne, Jackson Gibson, Labitiche Harold, Hunter Dow, Walford		x		- provide base-line data for fisheries management
- update old surveys (pre-1975): West Bay Panache, Camera, Evangeline Kettle, Sugar, Deerhound Long, LaCloche, Stratton Round, Birch, Loon Wenn, Ice, Brazil Georgia, Windfall, Elizabeth		x		- provide updated data for fisheries management
- conduct late winter water chemistry on coldwater lakes, locations to be determined		x		- assess suitability of lakes for stocking coldwater species
- identify and assess spawning habitat				
- walleye lakes - prior to rehab stocking or introductions: Kagawong, Wolsey		x		- identify need for habitat rehabilitation, increase success of stocking efforts
- where walleye production is below potential LaCloche Lk., Agnew Lk.			x	- identify need for habitat rehabilitation
- major coldwater streams, Manitoulin Island; rainbow trout and salmon spawning areas			x	- identify need for habitat rehabilitation and protection
- lake trout lakes/large warmwater lakes - subject to development or resource extraction; lakes to be identified in consultation with other services		x		- allow protection of spawning habitat
- rehabilitate degraded spawning habitat as required			x	- improve fisheries potential
- rehabilitate coldwater stream habitat			x	- improve fisheries potential
- Kagawong River and other locations as required				

Tactic	Non-Discretionary	Routine	Enhanced	Relationship to Objectives of Fisheries Management Plan
Commercial Fisheries				
- enforce quotas and commercial fish returns				- manage commercial fisheries on a sustained yield basis
- monitor monthly returns (CF.1's) and enter on computer files	x			
- audit returns; check on boats or port observers		x		
- establish quotas for incidental catch of salmon			x	- better utilization of incidental catch
- assess fish stocks, year class strengths and mortality rate and adjust quotas as required				- provide more refined data for quota setting and adjustment
- sample commercial catch		x		
- initiate an index netting program through commercial fishermen		x		
Baitfish				
- monitor baitfish annual returns	x			- ensure compliance with regulations and best utilization of licenced areas
- audit dealers annually		x		
- encourage baitfish aquaculture			x	- increase baitfish supply

APPENDIX 1 LAKE TROUT LAKES BY CLASSIFICATION - ESPANOLA DISTRICT

A-1 **100% Crown Ownership of Shoreline**
Excellent Population of Naturally Reproducing Lake Trout

Lake Name	Township	Lake Name	Township
Acheson	Acheson	Lake #3	Redden
Airport	Gervais	Lake #7 (Ian)	Plourde
Alces	Olinyk	Lake #21	Olinyk
Arrowhead (#26)	Lehman	Lake #42	Foucault
Bagpipe	Alton	Little Dennie	Dennie
Barrow	Mandamin	Little Touch (#55)	Fontaine
Bell (#29)	Poncet	Low	Roosevelt
Big Trout (#18)	Fontaine	Lower Shakwa	Oshell
Bluewater	Craig	McCool	Galashk
Boumage (Brush)	Fontaine	McGuey	Dunlop
Charcoal	Ouellette	Ortona	Lockeyer
Clayton	Galashk	Poupore	Lefebvre
Corner	Galashk	Robert	Plourde
Dennie	Dennie	Rushbrook	Ouellette
Dow (#4)	Strain	Russian (#13)	Monestime
Eleanor	Plourde	Savage	Shibananing
Five Star (#56)	Fontaine	Shakwa	Oshell
Folson	Gerow	Sinaminda	Gilbert
Gibson	Monestime	Snapshot	Cadeau
Gilbert	Gilbert	Sportsman (#54)	Fontaine
Grimard	Galashk	Squirrel	Dennie
Hider	Beebe	Star	Poncet
Kerr	Dunlop	Wensley (Brule)	Hotte
Klondyke (North)	Strain	Wiggly	Lehman
Lake #1	Lockeyer		

A-2 **Some Private Shoreline Property**
Excellent Population of Naturally Reproducing Lake Trout

Lake Name	Township
Batty (Whitefish)	Galashk
Bear	Roosevelt
Elizabeth	Foster
Helen (Hele)	Roosevelt
Lac Aux Sables	Lefebvre
Manitou	Bidwell
Mozhabong	Del Villano
Walker	Truman

Continued

APPENDIX 1 Continued

B-1 **100% Crown Ownership of Shoreline**
Fair Naturally Reproducing or Excellent Stocked Lake Trout Populations

Lake Name	Township	Lake Name	Township
Archambeau	Poncet	Long (#8)	Fontaine
Barn (#12)	Gervais	Marion	Ouellette
Bellows	Deagle	Millen	Mandamin
Deschamp	Poncet	Nook	Lehman
Florence	Mongowin	Ringer	Truman
Harold	Poncet	Surveyor	Olinyk
Jeanne	Beebe	Tip Top	Prescott
Kettle	Ethel	Upper Bark	Comox
Lake #13	Gervais	Wenn	Hotte
Limit	Ethel	Wright's (#11)	McKinnon
Little Pogamasing	Dennie		
Little Trout	Fontaine		

B-2 **Some Private Shoreline Property**
Fair Naturally Reproducing or Excellent Stocked Lake Trout Populations

Lake Name	Township	Lake Name	Township
Clear	Shedden		
East Bull	Boon	Loon	Merritt
Iroquois Bay	North Channel	Madawanson	Strain
Ishmael	Curtin	Rangers (Caribou)	Lehman
Kecil	Victoria	Round	Harrow
Kindle (#56)	Lehman	St. Leonard	Foster
Little Bear	Roosevelt	West Bay (Panache)	Truman
Long	Harrow	Whiskey	Gaiashk

C **Poor Lake Trout Populations**

Lake Name	Township
Alexander	McKinnon
Hannah	Curtin
Gough (Birch)	Gough
McLander	Dunlop
Moon	Monestime
Piano	Alton

APPENDIX 2 STOCKED WATERS BY ZONE - ESPANOLA DISTRICT

	Lake Trout	Brook Trout	Rainbow Trout	Fl Splake	Lake Trout Backcross	Walleye (CFIP)	Chinook Salmon (CFIP)
Zone 1							* Meldrum Bay * Providence Bay * Michaels Bay * Srigley Bay * Lake Huron at South Baymouth
Zone 2	Iroquois Bay (Lake Huron)				Haywood Island * Bedford Island Gore Bay/Darch Island	McGregor Bay * Bay of Islands * Strawberry Channel	
Zone 3	Manitou (Sandfield) South Bay (Lake Huron)	** Kagawong River (Bridal Veil Falls)	** Kagawong River (Bridal Veil Falls)		South Bay (Lake Huron)	* Kagawong (Allan, Billings, Campbell)	
Zone 4	Bellows (Deegle) Clear (Shedden) Elizabeth (Foster) Florence (Mongowin) Kecil (Victoria) Loon (Merritt) Long #23 (Harrow) Round #7 (Harrow) Snapshot (Cadeau) Walker (Truman)	Elbow #13 (McKinnon) Lake #8 (Nairn) Lake of the Mountain (Baldwin) Long #20 (Nairn) Nameless #4 (Foster) Mile #20 (Roosevelt) Rock (Nairn) Shoe (Solski) Wright's (McKinnon) ** Aux Sables River (Chutes Prov. Park)	Hanwood (Roosevelt) ** Aux Sables River (Chutes Prov. Park)	Spring (Merritt) Pleasant (Foster)		Sugar (Victoria) Walford (Shedden) Lang Lake Chain (Curtin, Roosevelt, Truman) Spanish River	
Zone 5	East Bull (Boon) Folson (Gerow) Kindle (Lehman) Whiskey (Lehman)	Black #39 (Lockeyer) Moreland #41 (Lockeyer) Spec #8 (Galashk) Tarsen #66 (Lehman) Walton #38 (Lockeyer) Weasel #10 (Galashk)					

Continued

* Proposed stocking

** Species dependent on catchable size stock available

APPENDIX 2 STOCKED WATERS BY ZONE - ESPANOLA DISTRICT

	Lake Trout	Brook Trout	Rainbow Trout	Ft Splake	Lake Trout Backcross	Walleye (CFIP)	Chinook Salmon (CFIP)
Zone 6		Lake #18 (Plourde)					
Zone 7	Marion (Ouellette) Rushbrook (Ouellette) Shakwa (Oshell)	Lake #64 (Hotte) Len (Ouellette) Marian (Ouellette) Tomasina (Gilbert)	Georgia (Ouellette)				
Zone 8		Frying Pan (Lefebvre)					
Zone 9	Madawanson (Strain) Millen (Mandamin) Ortona (Lockeyer)	Boundary (Gough) Charles (Bigelow) Clear (Gough) Gable (Deagle) Gaetano (Cadeau) Gordon #20 (Weeks) Hone (Deagle) Lake #8 (Lockeyer) Lake #13 (Lockeyer) Lake #15 (Rowat) Lake #16 (Oshell) Lake #17 (Prescott) Lake #18 (Rowat) May (Gough) McKiggan (Deagle) S (Solski) Streich (Shibanening) Sheon (Cadeau) Supple #10 (Gervais) Tilt (Shibanening) Tiplady (Shibanening) 55 Mile (Gervais)	Beaver (Monestime)	Lake #78 (Gervais) Lake #98 (Gervais) Little Long (Redden) Long #5 (Gough) Splake (Lockeyer)			

APPENDIX 3 DESIGNATED TOURISM LAKES BY ZONE - ESPANOLA DISTRICT

Zone 5

Lake Name	Township
Wiggly	Lehman

Zone 6

Lake Name	Township
Bell (#29)	Poncet
Deschamp	Poncet
Tip Top	Plourde/Prescott

Zone 7

Lake Name	Township
Mile *	Del Villano

Zone 8

Lake Name	Township	Lake Name	Township
Big Trout	Fontaine	Frying Pan	Fontaine/Lefebvre
Boumage	Fontaine	Long (#8)	Fontaine
Five Star	Fontaine	Poupore *	Lefebvre

Zone 9

Lake Name	Township	Lake Name	Township	Lake Name	Township
Acheson	Acheson	Jasper *	Jasper	Ritchie	Monestime
Airport	Gervais	Kennedy	Gilbert/Stralak	Russian	Monestime/Olinyk
Alces	Olinyk	Lidstone *	Avis	S (#34)	Solski
Alton *	Alton	Little Long	Redden	Squirrel	Dennie/Del Villano
Berst (#97)	Gervais/Beebe	Little Pogamasing	LaFleche/Dennie	Streich	Shibananing
Comox *	Comox	Marguerite	Craig/Ouellette	Tilt	Shibananing
Complin	Gough	Newman	Shibananing	Tinlady	Shibananing
Deluge *	Ethel/Durban	Pawson	Gough	Tower (#57)	Solski
Dumbell	Assef	Piano	Alton	Trevor	Assef
Fish Hawk	Alton	Pogamasing	LaFleche/Dennie	#21	Olinyk
Forestell	Shibananing	Red Elk *	Assef	#42	Foucault
Gilden	Dennie/Gilbert	Reynolds	Solski		

* Site of existing outpost camp facilities. Remainder of lakes used for fly-in or boat-in day use. Some may be available for facility development in the future.

ESPANOLA DISTRICT

Map 1

Fisheries Management Tactics 1986–90

1 Fisheries Management Zone

■ Designated Tourism Lake

▒ Special Management Program

Fish Stocking:

- ✷ Lake Trout
- ✦ Brook Trout
- ✧ Rainbow Trout
- ✲ F1 Splake
- ◦ Lake Trout Backcross
- • Walleye
- ★ Fish Culture Station/Site

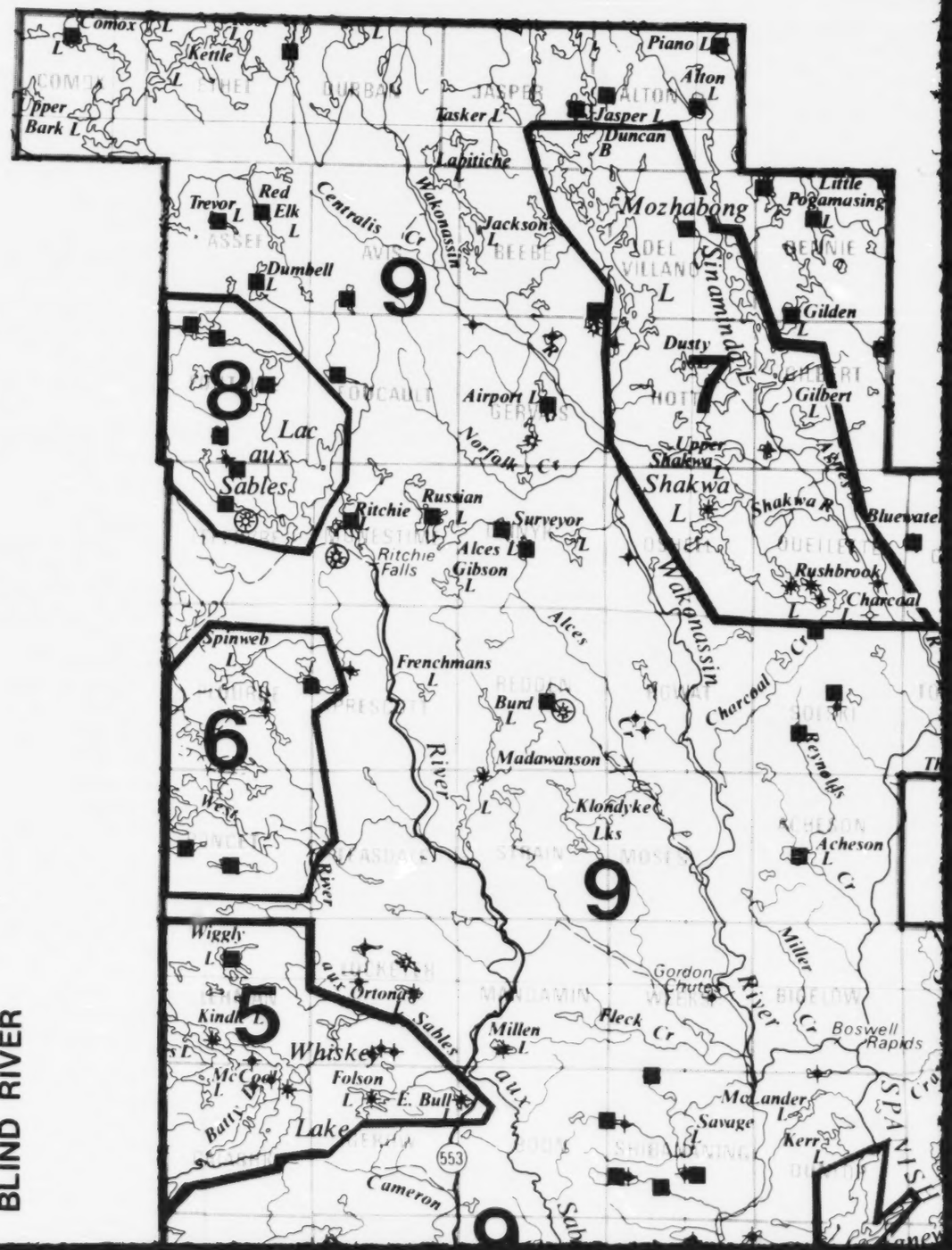
Fish Introductions:

- ◬ Lake Trout Backcross
- ◬ Walleye
- ◬ Salmon

Rehabilitation:

BLIND RIVER

CHAPLEAU



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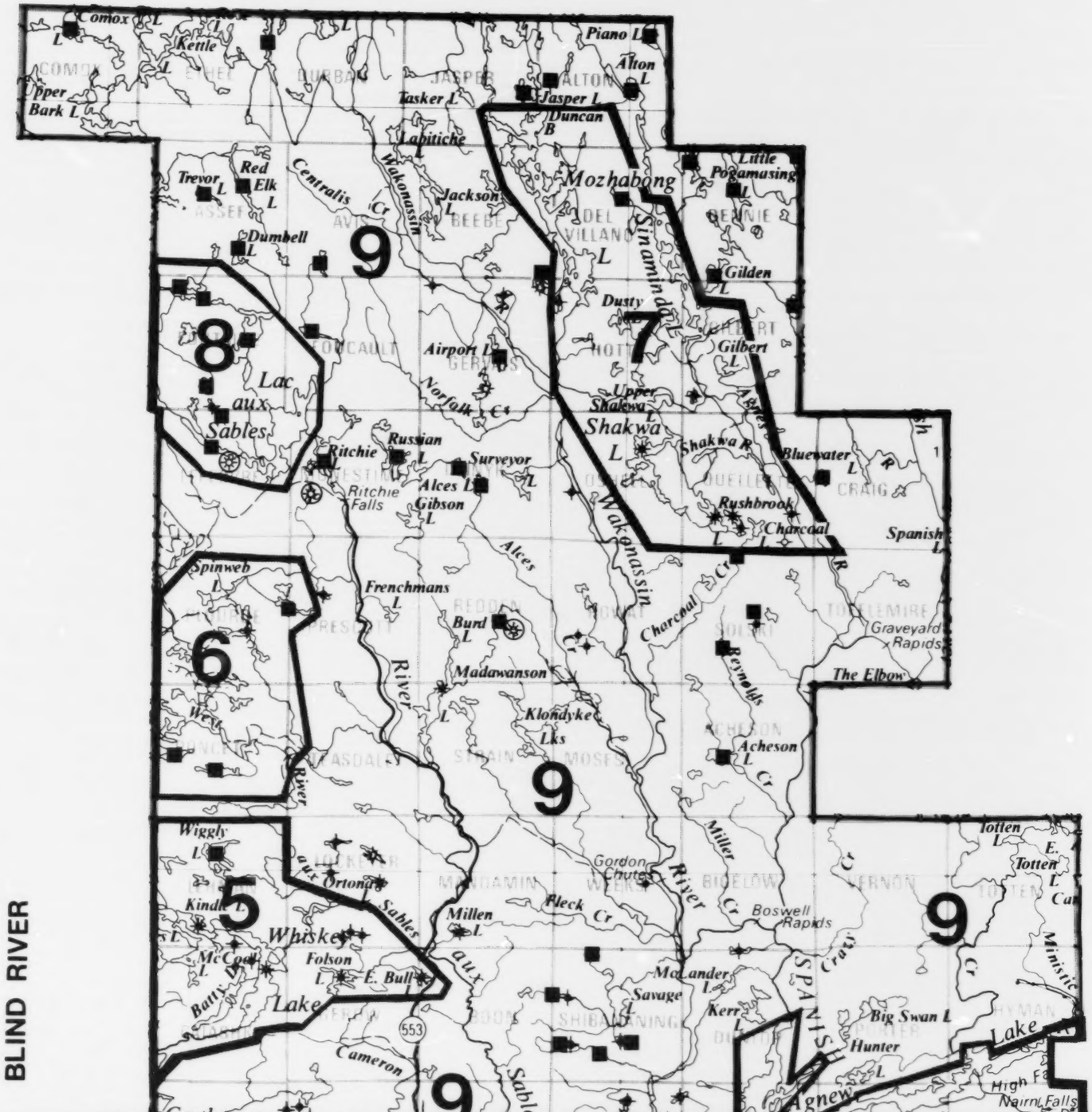

- Rainbow Trout
- F1 Splake
- Lake Trout Backcross
- Walleye
- ★ Fish Culture Station/Site

Fish Introductions:

- Lake Trout Backcross
- Walleye
- Salmon

Rehabilitation:

- Walleye
- Habitat

Assessment:

- Creel
- Index Netting
- Stocking

BLIND RIVER

CANADA

Mississagi Strait

THE SPANISH RIVER

Bay of Islands

Lake Kagawong

Lake Cloche

Lake Manitou

Bayfield Sound

Clapperton Channel

Main Passage

Gordon Chutes

Boswell Rapid

Great La Cloche I

Little Current

Webbwood

Massey

Spanish

Walford

Kecil L

Gough

Meanaau Falls

Cameron Falls

Sheguiandah

Sheguiandah B

Manitowaning

Gore Bay

Barrie Island

BARRIE ISLAND

COCKBURN ISLAND

GORDON

HOWLAND

BILLINGS

ASSIGINACK

BURPEE

Evansville

Sheshegwaning

Meldrum Bay

Silver Water

Elizabeth Bay

Rockville

West Bay

Ice Lake

Tamarack Pt

Francis Pt

Freer Pt

Julia Pt

Blackstock Pt

Cape Robert

Meldrum Pt

Chamberlain Pt

Crescent I

Vidal I

Ross Pt

Channel Pt

Boom Pt

Smith Pt

Kitchener I

Greene I

Belanger Pt

Burnt Island

Western Duck I

Inner Duck I

Misery Pt

Gatacre Pt

Portage

Darch I

Eagle I

Aird I

Croker I

Bournot I

Bedford I

Clapperton I

Amedroz I

Courtney I

Bears

Back I

Fox I

Benjamin Is

Innes

McBean Harbour

Sagamok

Frechette

Round Hill

Cloche

Evangeline

Cutler

Maple

Lee Valley

Miller River

Fleck Cr

Millen L

Whiskey L

Folson L

E. Bull L

McCool L

Batty L

Savage L

McLander L

Kerr L

Sables aux Ortona

Cameron

Carthy

Bellows L

Snapshot

Little Serpent L

Shedden L

Walford L

Sugar L

Foxey

Tobacco L

Advance

Ice L

Perch L

Pike L

Turtle L

Mud L

Poplar L

Long Bay

Green Bay

Basy Bay

Cutler Cr

Green B

Mudge B

Julia B

Elizabeth B

Helen B

Belanger B

Maple B

Vidal B

Meldrum B

Wagosh B

Robinson B

Tolsma B

Robb L

Silver L

Loon L

Lily L

Falls L

Fernlee

Perivale

Lorne

Burpee L

Lake Wahnapitae

Wahnapitae R

Wahnapitae

Sagamok

Birch Island

Turner

Strawberry I

Green B

Cutler Cr

Channel

Aird I

Green

Ross Pt

Channel Pt

Robb L

Tolsma B

Robinson B

Meldrum B

Maple B

Vidal B

Wagosh B

Belanger B

Julia B

Mudge B

Elizabeth B

Helen B

Green B

Sheguiandah B

Wahnapitae

Cameron Falls

Webbwood 665

Birch Island 636

Little Current 586

Manitowaning 739

Sheguiandah 700

Lake Kagawong 700

Wahnapitae R 638

IR19

IR20

IR21

IR22

IR22A

IR23

IR24

IR5

540

540A

542

551

553

665

636

586

739

700

638

9

5

4

2

1

3

BLIND RIVER

SUDBURY

9

5

9

9

4

4

2

2

1

2

3

3

2

Lks

Acheson L

Cr

River

Wiggly L

aux Ortona

Sables

Gordon Chute

Miller Cr

River

Totten L

E. Totten L

Kindle L

Millen L

Fleck Cr

Boswell Rapids

Whiskey

McCool L

Folson L

E. Bull

Batt

Lake

aux

553

Savage L

McLander L

Kerr L

Big Swan L

Hunter L

Lake

Agnew

Cameron

Sables

Cr

Carthy

Bellows L

Snapshot

Little Serpent L

Gough

Mearoau Falls

Cameron Falls

BALDWIN

NAIRN

Wabagishi L

Webbwood

665

Espanola

Vermilion L

Kecil L

Shedden L

Lang L

Sugar L

THE SPANISH RIVER

Massey

Walford

Walford L

Serpent

Spanish

Green

Channel I

SPANISH

McBean

Sagamok

Aird I

McBean I

Frechette I

Eagle I

Benjamin Is

Fox I

Croker I

Darch I

Main Passage

Innes

Bournot I

Ameroz I

Bedford I

Bears I

Back I

Clapperton I

Courtney I

Vankoughnet I

Clapperton Channel

W Rous I

Wahuno

Great La Cloche I

Lewis I

Moorey

Bay of Islands

Bkon Islands

626

McGregor Bay

Apex L

Cloche

Lee Valley

Cr

Cutler L

Maple L

Evangeline L

West River

Mt. Arabella

Mt. Ararat

Round Hill

La Cloche

Lake CLOCHE

White Mtn

Base L

Raven L

Lang L

The Plunge Falls

Williamsville

Hanna L

West B

Walker L

Stanton L

Anderson Lake

Loon L

Brazil L

Cape Robert

Crescent I

Vidal I

Julia Pt

Blackstock Pt

Vidal B

IR20

Sheshegwaning

Horace Pt

Barrie Island

Julia B

BARRIE ISLAND

Henry I

Morrisville

Gore Bay

Gore Bay

Francis Pt

Tamarack Pt

Mudge B

Ice Lake

Freer Pt

Turner L

Little Current

586

IR23

Strawberry Bad

Heywood I

Sheguiandah

Sheguiandah B

Perch L

Silver L

Silver Water

Fernlee

Elizabeth B

Bayfield Sound

Helen B

Elizabeth Bay

Burnt Island

Foxey

Tobacco L

GORDON

Ice L

Advance

Billings

Lake Kagawong

BILLINGS

Long Bay

Mud L

Poplar

Evansville

IR21

BURPEE

Horne L

Misery Pt

Inner Duck I

Portage

Perivale

Rockville

West Bay

Monora

Green Bay

HOWLAND

Bass L

Pike L

IR24

Turtle L

Green B

Lake

ASSIGINACK

Manitowaning Bay

Burnt I

Big Burnt I

Squaw I

Wikwemikong

Smith B

Cape Smith

West Bay

Lake Kagawong

Lake Manitou

540

540A

542

551

548

547

700

739

CANADA

Boom Pt

Mississ

Greene I

Belanger Pt

Belanger B

Burnt Island

Silver Water

Fernlee

Bayfield Sound

Elizabeth B

Helen B

Elizabeth Bay

Loon L

Lily L

Silver L

Smith Pt

Rosh B

Western Duck I

Inner Duck I

Misery Pt

Gatacre Pt

Portage

Evansville

IR21

BURPEE

Long L

Burpee L

Middle Duck I

Great Duck I

Outer Duck I

580'

MANITOULIN

ISLAND

HURON

Britainville

Srigley

Grimsthorpe

Spring Bay

Dominion Pt

Milton Pt

Dean B

Providence

Providence Bay

CARNARVON

Timber B

Hughson B

Hughson

Michael

Michael Pt

Walker Pt

South Baymouth

Thomas Pt

Thomas B

Hungerford Pt

Owen

Foxey

GORDON

Tobacco L

Ice L

Advance

Campbell

Lake Wekey

Mud L

Poplar

Long Bay

Billings

BILLINGS

Lake Kagawong

West Bay

Rockville

Green B

Perivale

Mindemoya

Mindemoya L

Martin L

Windfall L

Rock L

Tehkummah

Honora

HOWLAND

Green Bay

Bass L

Pike L

IR24

Turtle L

Lake

ASSIGINACK

Big Bake

Big L

Long L

Manitou

Manitowaning

SANDFIELD

Sandfield

Snowville

Hilly Grove

Sucker L

The Slash

South Bay

Redro

Indian Harbour Pt

Fitzwill

MA

82°30'

82°00'

1

3

Ministry of Natural Resources

Ontario

Miles 10 0 10

Kilometres 10 0 10

Silver L.
Loon L.
Silver Water
Fernlee
Elizabeth B
Mayfield Sound
Helen B
Campbell L.
Lake Hokey
Foxey
Tobacco L.
Ice L.
GORDON
Advance
Billings
Lake Kagawong
BILLINGS
Rockville
West Bay
Green B
IR22
Pike L.
IR24
Turtle L.
HOWLAND
Green Bay
Bass L.
Big Burnt I
Squaw I
Wikwemikong
Smith B
Cape Smith
Burnt Island
Evansville
IR21
BURPEE
Lorne
Mud L.
Poplar
Long Bay
Perivale
Mindemoya L.
Lake Manitou
ASSIGINACK
Manitowaning Bay
Inner Duck I
Misery Pt
Gatacre Pt
Portage
Britainville
Spring Bay
Big L.
Long L.
Manitowaning
Buzwah
Two O'Clock
Kaboni
Middle Duck I
Srigley
Grimsthorpe
Mindemoya
Martin L.
SANDFIELD
Sandfield
Sucker L.
Hilly Grove
Windfall L.
Snowville
James B
Horsburgh Pt
MANITOULIN
ISLAND
Great Duck I
Outer Duck I
Dominion Pt
Milton Pt
Dean B
CARNARVON
Providence Bay
Providence
Rock L.
Tehkummah
IR26
Rabbit I
Timber B
Hughson B
Hughson Cr.
Manitou R.
TEHKUMMAH
Pine Slash
South Bay
Redrock L.
Tamarack Pt
HURON
Michael L.
Michael Pt
Walker Pt
South Baymouth
Thomas Pt
Thomas B
Hungerford Pt
Owen Channel
Wall I
Club I
Lonely I
Northeast Pt
82°30′
82°00′
FITZWILLIAM I.
Indian Harbour Pt.
Fitzwilliam Channel
Yeo I.
Lucas I.
Halfmoon I.
MAIN CHANNEL
Miles 10 0 10
Kilometres 10 0 10
N